Remarks of FCC Commissioner Michael O'Rielly
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Thank you, Carolina, for the kind introduction. I want to thank Minister Luna, Martha Suarez and ANE, and the team at Forum Global for inviting me to join you here in Bogota. I must admit that this is actually my first trip to beautiful Colombia and, in fact, my first time in Latin America. This is an appropriate theme since I would like to take this opportunity to talk with you about another first – the recent conclusion of the U.S. broadcast incentive auction.

As representatives for our respective nations, industries and organizations, we collectively struggle with the difficulties of identifying spectrum resources for the next generation of wireless technologies. Innovators and entrepreneurs push forward to provide new offerings, faster service, and increased capacity, but additional bandwidth is needed for such benefits to come to fruition. While mid- and high-band spectrum, including the millimeter wave frequencies, have been the focus of much attention, many providers are also eyeing low-band spectrum. This provides challenges because – I think it is safe to say –none of us have a lot of unused low-band frequencies lying around.

By most accounts, the U.S. broadcast incentive auction was a success. Does that mean it was perfect? No. This was a very complex undertaking. Were lessons learned? Absolutely, and I will discuss that a bit later. But all things considered, the mechanisms designed and put in place worked relatively well. Through the incentive auction, the U.S., on a completely voluntary basis, reallocated broadcast spectrum to mobile use, which will now be used by private commercial providers to offer 4G and 5G broadband networks. In fact, one U.S. winning bidder has already announced that it will initiate 5G in 600 MHz and has already turned on its first 600 MHz LTE system.

Generally, and I am going to simplify our overall process a bit as I only have a limited amount of time, the U.S. incentive auction had two separate, but complementary, parts – the reverse auction and the forward auction. In the reverse auction, willing broadcasters *voluntarily* offered to relinquish their spectrum rights for a portion of the proceeds. The decision to participate was left completely to the individual broadcaster. They could surrender their license or opt to move to the VHF band and get payments in return. Importantly, opting to surrender a license does not mean that a winning station will go off-air, because we provided an option for stations to enter into arrangements to share a channel with another station. And, since participation was voluntary, stations could also simply decide not to participate, in which case they would be repacked in the remaining TV band and continue to operate their stations.

The auction was conducted in a series of stages, with each stage consisting of a reverse and a forward auction, each consisting of multiple bidding rounds. At the start of each stage of the auction, the Commission announced how many megahertz it would attempt to reallocate, known as the clearing target. In the reverse auction, all broadcasters interested in selling their spectrum or moving to VHF were provided an opening price. If the number of broadcasters interested in selling exceeded the number of stations that needed to be cleared in a particular area, the price for the station was reduced in the next round, and stations had the choice as to whether or not to accept that lower price to vacate their spectrum. The auction rounds continued until the number of stations willing to sell was the same as the number of stations the FCC needed to meet the clearing target. At the end of this process, the

total amount needed to cover the expenses to pay the broadcasters, along with other costs, was set by the market.

The forward auction followed, with participants placing bids for the number of ten megahertz licenses that they wanted to purchase. In each round, the price of the licenses increased until the number of licenses sought equaled the number of licenses available. The proceeds raised in the forward auction were then compared to the costs of the reverse auction. If the forward auction revenues exceeded the reverse auction and the amount to repack remaining broadcasters, along with some additional costs, the auction was permitted to conclude. If not, the auction would proceed to the next stage with a new clearing target. Simple, right?

The benefit of providing these remarks post-auction is that I can provide actual examples. Based on the interest of broadcasters, the Commission set the initial clearing target for stage 1 at 126 megahertz, which means that 100 megahertz would be reauctioned for flexible use wireless licenses. After the reverse auction rounds were completed, the amount to cover the price sought by broadcasters to relinquish their spectrum was a whopping $86 billion. The forward auction, however, raised approximately $23.1 billion in gross proceeds, therefore stage 1 of the auction did not meet its target. The incentive auction then proceeded to stages 2 and 3. After going through these rounds, the forward auction revenues still did not cover the reverse auction's costs.

It was in the fourth stage that the auction reached equilibrium between the prices broadcasters wanted for their spectrum and the price the wireless carriers were willing to pay. Here, the Commission set the clearing target at 84 MHz, providing 70 MHz of wireless licensed spectrum. The amount needed to compensate the broadcasters was about $10 billion and the forward auction gross proceeds were $19.6 billion, more than enough to cover all expenses. The auction was able to conclude.

In going through this process, the free market ultimately decided all of the key components: how much compensation was needed for broadcasters to sell their licenses, how much wireless providers were willing to pay for spectrum, and how much spectrum was to be cleared in the process. In the end, industry participants determined that the highest value use of this spectrum was to reallocate 84 MHz of spectrum to wireless, while the rest of the spectrum continues to be used for broadcast licenses. The auction permitted a large infusion of cash for many broadcasters who decided to sell licenses, move to VHF, or channel share. The $10 billion paid to exiting broadcasters will be used to improve programming for remaining stations and provide funds to upgrade facilities enabling cutting edge technologies, such as ATSC 3.0. This overall process had the effect of strengthening the overall health of U.S. broadcast industry. Additionally, more than $7.3 billion in auction proceeds will go to the U.S. Treasury, benefitting American taxpayers.

Now that the actual auction is over, the U.S. is beginning the process of repacking the broadcast stations and freeing up the spectrum for wireless use. This will be done in a series of ten phases that should be completed by July 2020. It is being staggered to ensure that stations are moved in an organized fashion so that the transition will be efficient and expeditious; there will not be harmful interference; and spectrum will be cleared and put to use as soon as possible.

Of course, I would be remiss if I didn't mention the assistance that we received from our friends in Canada and Mexico. The close relationships that we have with these governments led to beneficial coordination, the reduction of cross-border interference issues and the harmonization of these bands

across neighboring countries. Without these successful negotiations, an already difficult task would have been far more difficult, if not impossible.

When I started, I admitted that the complex U.S. model was not perfect, and this touches upon the competing – and oftentimes conflicting – policy goals that countries try to achieve when setting auction policy. This is a subject many international regulators have discussed with me, and one the U.S. struggles with too. This is also an area where my views did not line up exactly with the past Administration and our final rules.

For over two decades, the Commission rightfully articulated and pursued free market principles with regards to spectrum management, particularly the awarding of spectrum licenses. During the previous Commission, however, some key decisions were based not on sound principles and data but in response to make-believe policy concerns. In doing so, the Commission tilted the outcome in favor of helping a favored few, with the unintended consequence of impacting the overall participation.

For instance, the Commission implemented "reserve" licenses to benefit certain market participants that held less sub-1 GHz spectrum. These rules shielded select entities from auction competition with other providers to essentially guarantee their success in the auction. Further, to the extent that the Commission auctioned licenses that would be impaired by interference from surrounding broadcasters, these favored carriers would get the "clean" licenses at a cheaper price, while the impaired licenses would end up in the hands of the less-favored, larger providers. And this was a serious concern for participants during the auction, because stages 1 through 3 included these impaired licenses.

To enact this disparate treatment, the previous Commission primarily relied on the overarching argument that larger providers have the incentive to acquire spectrum they do not need solely to deprive competitors of the asset, preventing competitors from entering markets and improving services, or raising their costs. They also said forbearance was likely because of the importance of low-band spectrum. However, such a strategy was highly improbable because publicly-traded companies can't spend billions on spectrum that they do not need in the relative near-term. And, there has not been one scintilla of evidence of U.S. wireless providers ever utilizing a foreclosure strategy in previous spectrum auctions. These derivations from sound policies were effectively chasing a non-existent ghost.

Social engineering of auctions has never worked in the U.S. and it certainly didn't work here. Of the two smaller nationwide providers, which these policies were meant to help, one didn't even participate. And, of the two companies that some claimed could foreclose spectrum opportunities, one never placed a bid and the other won only 23 licenses out of the 2912 offered. In analyzing the auction data, it appears that the provider who did win licenses was actually trying to get out of the auction altogether.

The lessons learned were that foreclosure was never in play; companies are not willing to pay any price for spectrum, especially if the rules are stacked against them; and even if you design auctions to appeal to certain entities that doesn't mean they will show up. While we will never know how much money the forward auction would have made without the reserve licenses and these impairment rules, it is safe to say that, at a minimum, it is likely that a lot of money was left on the table, less spectrum was repurposed for wireless use, and broadcasters did not see the prices they were expecting. I relay this to you not to deter you from an incentive auction, but as a reminder that auction policies can have drastic and unintended effects on auction results.

Even despite some poor policy decisions, the incentive auction was a relatively successful vehicle for reallocating low-band spectrum for 4 and 5G wide-area broadband connectivity. This is not only beneficial for the mobile industry but also broadcasters who obtained substantial funds to improve their service offering and upgrade to the latest and greatest technologies. I humbly suggest to this audience that the U.S. broadcast incentive auction could provide a good model for Latin American countries to do the same. To make things somewhat simpler, many of you have fewer broadcasters to repack and have not gone through an analog to digital broadcast conversion.

Unlike the U.S., you could pursue your DTV transition while clearing 700 MHz and implementing an incentive auction to open the 600 MHz band for mobile use in one step. This would avoid a so-called double-hop, or requiring broadcasters to be reassigned licenses and migrate twice. Ultimately, with an incentive auction, you would provide the flexibility to allow your own industries to determine how valuable spectrum resources should be used, while potentially providing funds for your broadcast industry.

I thank you for listening to my thoughts about our broadcast incentive auction and I will turn the floor over to the expert panel to discuss the possibilities of 600 MHz throughout the Latin America region.